

Settlement Agreement April 2004 Updates



Prepared for the
Technical Oversight Committee
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ARTHUR R. MARSHALL LOXAHATCHEE NATIONAL WILDLIFE REFUGE

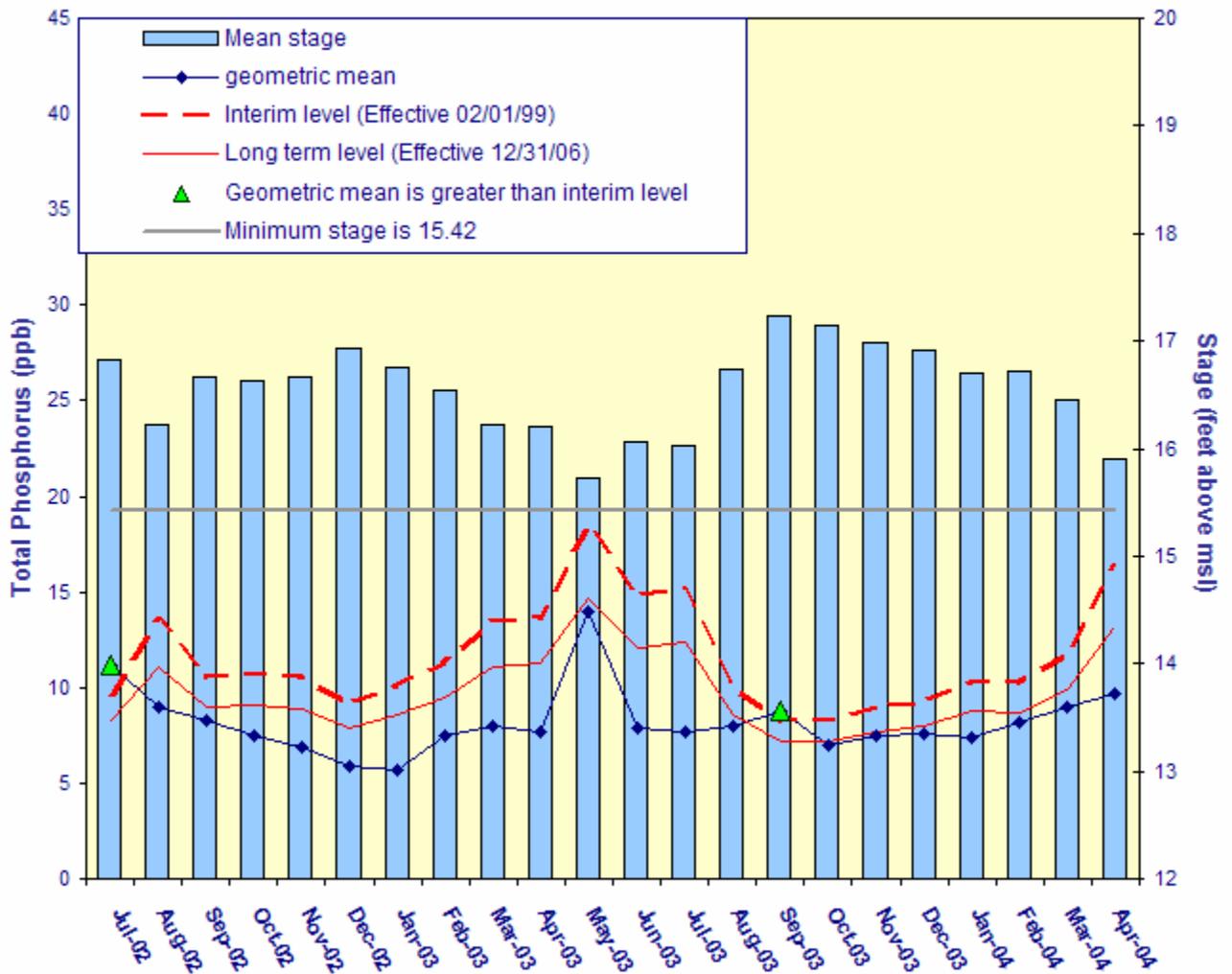


Figure 2. Monthly total phosphorus geometric mean concentrations for the A.R.M. Loxahatchee National Wildlife Refuge compared to the interim and long-term levels. Interim and long-term levels are not applicable if the average stage is less than 15.42 ft. The calculated level concentrations are adjusted for fluctuations in stage.

Table 1. Loxahatchee National Wildlife Refuge Total Phosphorus Compliance Tracking.

Month - Year	Geometric Mean Concentration	Interim Level (ppb)	Long Term Level (ppb)	Average Stage	Number of TP Samples	Number of Stage Measurements
	(ppb)	Effective 2/1/99	Effective 12/31/06	(ft, NGVD)		
Jul-2002	11.2	9.7	8.3	16.82	14	3
Aug-2002	9.0	13.5	11.1	16.22	12	3
Sep-2002	8.3	10.6	8.9	16.66	11	3
Oct-2002	7.5	10.7	9.0	16.64	12	3
Nov-2002	6.9	10.5	8.9	16.66	12	3
Dec-2002	5.9	9.2	7.9	16.93	14	3
Jan-2003	5.7	10.0	8.5	16.76	13	3
Feb-2003	7.5	11.3	9.5	16.54	11	3
Mar-2003	8.0	13.4	11.1	16.23	9	3
Apr-2003	7.6	13.7	11.2	16.20	12	3
May-2003	14.0	18.3	14.6	15.72	7	3
Jun-2003	7.9	14.8	12.1	16.06	11	3
Jul-2003	7.7	15.2	12.3	16.02	9	3
Aug-2003	8.0	10.1	8.6	16.74	14	3
Sep-2003	8.8	8.3	7.2	17.23	13	3
Oct-2003	7.0	8.3	7.2	17.15	14	3
Nov-2003	7.5	8.9	7.7	16.98	11	3
Dec-2003	7.6	9.3	8.0	16.91	14	3
Jan-2004	7.4	10.3	8.7	16.71	14	3
Feb-2004	8.2	10.3	8.7	16.71	14	3
Mar-2004	9.0	11.8	9.8	16.46	14	3
Apr-2004	9.6	16.3	13.1	15.91	9	3

Notes:

- (1) Average Stage is calculated using stage elevations at stations 1-7, 1-8C, and 1-9 on the sampling date.
- (2) Highlighted rows indicate months when excursions occurred.
- (3) N/A denotes that the concentration values were not applicable because the average stage was less than 15.42 feet.

EVERGLADES NATIONAL PARK - SHARK RIVER SLOUGH

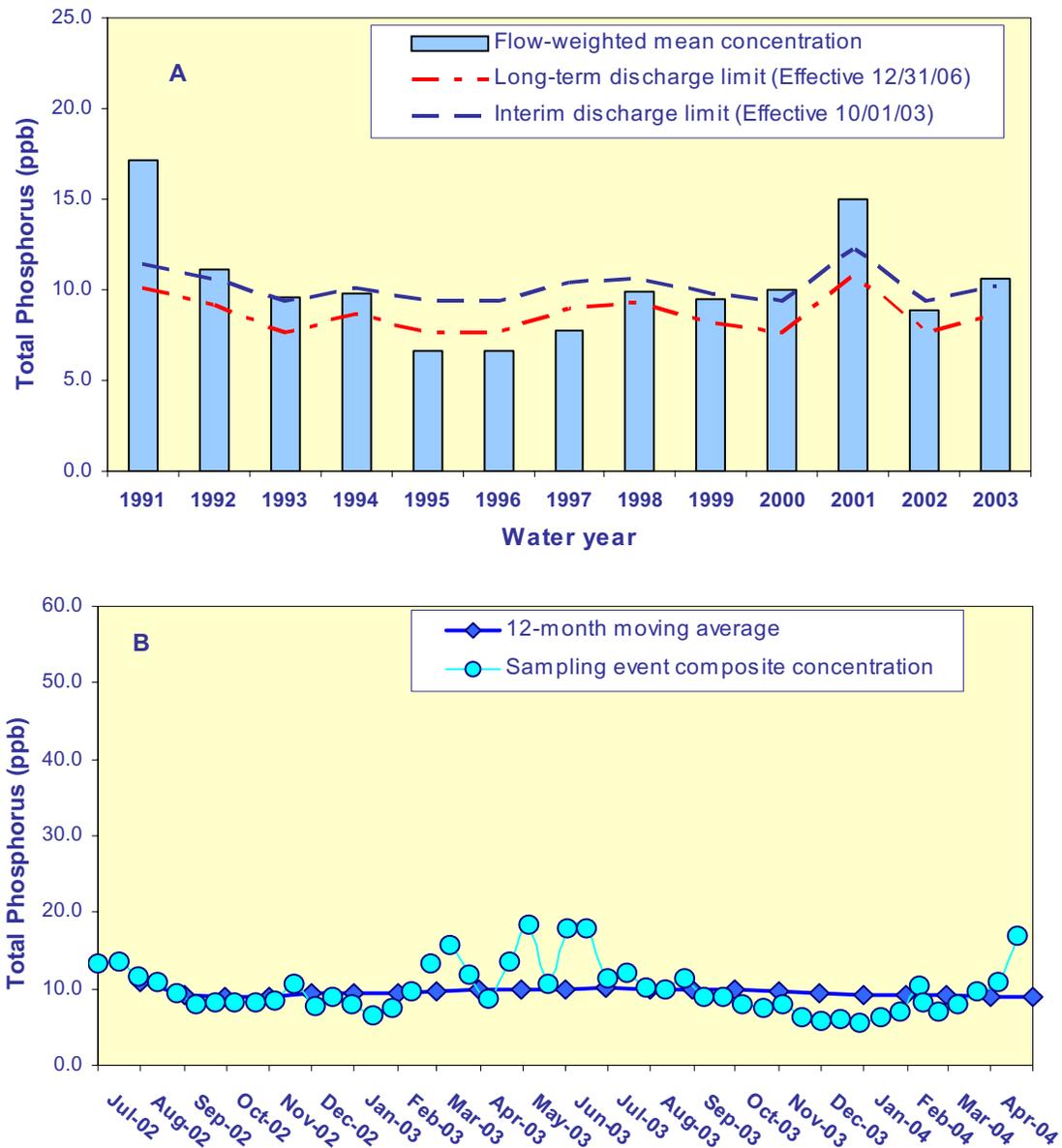


Figure 3. Total phosphorus flow-weighted mean concentrations (fwmc) in inflows to Everglades National Park through Shark River Slough.
A. The 12-month moving average fwmc at the end of each water year compared to the total phosphorus interim and long-term limits.
B. The 12-month moving average fwmc at the end of each month and the composite total phosphorus concentration for each sampling event.

Table 2. Shark River Slough Total Phosphorus Concentration Compliance Tracking.

12-Month Period Ending On	Total Period Flow	Flow Weighted Mean Total Phosphorus	Interim Limit (ppb)	Long Term Limit (ppb)	Percent of Sampling Events Greater than 10 ppb	
			Effective	Effective	(%)	
	(Kac-ft)	(ppb)	10/1/2003	12/31/2006	Guideline	Observed
31-Jul-02	958.5	10.9	9.7	8.1	43.1	<i>45.8</i>
31-Aug-02	1003.2	9.1	9.6	7.9	42.3	39.1
30-Sep-02	1048.1	8.8	9.4	7.7	41.4	30.4
31-Oct-02	999.9	8.9	9.6	7.9	42.6	30.4
30-Nov-02	884.5	9.4	10.0	8.5	45.4	34.8
31-Dec-02	802.2	9.6	10.4	8.9	47.4	33.3
31-Jan-03	831.1	9.5	10.3	8.8	46.7	34.8
28-Feb-03	843.6	9.7	10.2	8.7	46.9	39.1
31-Mar-03	812.1	9.9	10.3	8.9	47.6	<i>47.8</i>
30-Apr-03	832.1	9.9	10.2	8.8	47.5	43.5
31-May-03	871.3	10.0	10.1	8.6	47.0	45.8
30-Jun-03	901.1	10.2	10.0	8.4	46.4	<i>50.0</i>
30-Jun-03	901.1	10.2	10.0	8.4	43.8	<i>50.0</i>
31-Jul-03	891.3	9.8	10.0	8.5	44.0	<i>50.0</i>
31-Aug-03	839.3	9.9	10.2	8.7	45.3	<i>50.0</i>
30-Sep-03	850.1	10.0	10.2	8.7	45.1	<i>50.0</i>
31-Oct-03	921.8	9.7	9.9	8.3	43.3	<i>50.0</i>
30-Nov-03	1001.5	9.5	9.6	7.9	41.4	<i>46.2</i>
31-Dec-03	1076.8	9.1	9.4	7.6	40.1	<i>46.2</i>
31-Jan-04	1049.0	9.2	9.4	7.7	40.4	<i>46.2</i>
29-Feb-04	1033.9	9.1	9.5	7.8	40.7	<i>44.4</i>
31-Mar-04	1036.7	8.9	9.4	7.7	40.7	37.0
30-Apr-04	1012.9	9.0	9.5	7.9	41.2	40.7

Notes: *Bold italicized values exceeded allowed percentage*

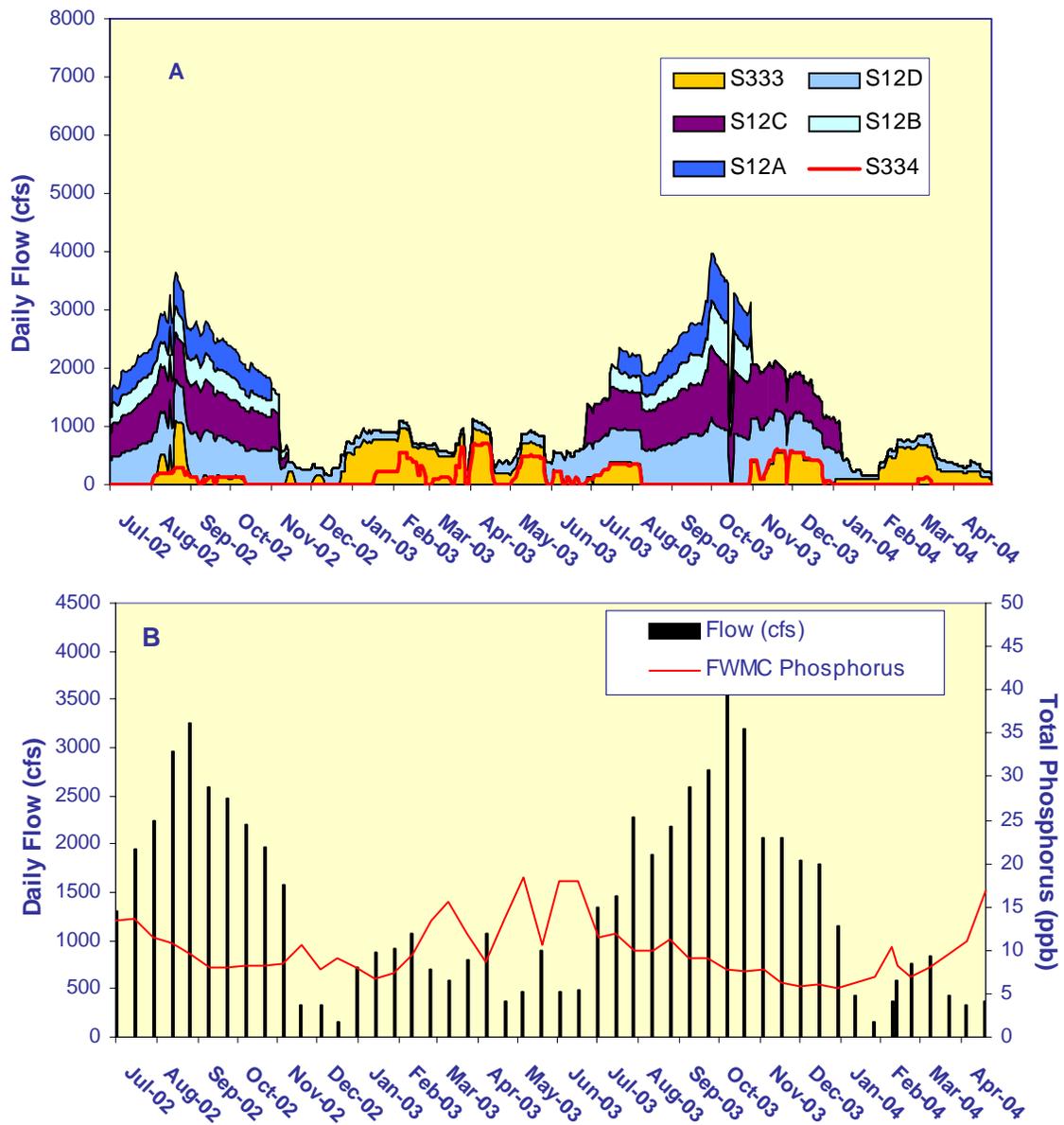


Figure 4. **A.** Daily flows into Shark River Slough (through S12 structures and S333) and flow through S334. **B.** The relationship between daily flow at Shark River Slough structures and the corresponding flow-weighted mean total phosphorus concentrations for individual sampling events.

Taylor Slough and the Coastal Basins

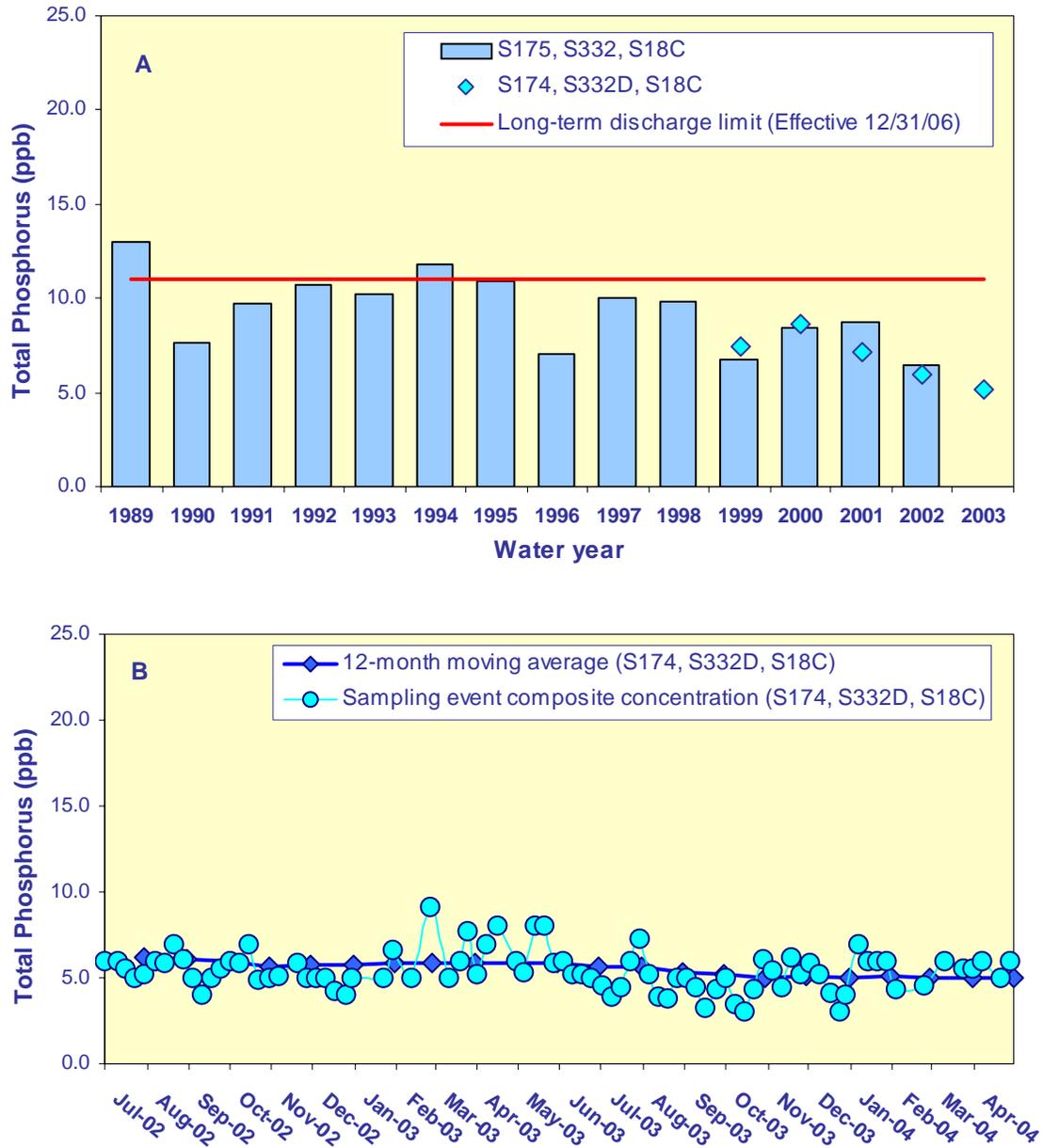


Figure 6. Total phosphorus flow-weighted mean concentrations (fwmc) in inflows to Everglades National Park through Taylor Slough and the Coastal Basins. **A.** The 12-month moving average fwmc at the end of each water year compared to the 11 ppb long-term total phosphorus limit. **B.** The 12-month moving average fwmc at the end of each month and the composite total phosphorus concentration for each sampling event.

Table 3. Taylor Slough and the Coastal Basins Total Phosphorus Concentration Compliance Tracking.

12-Month Period Ending On	Total Period Flow	Flow Weighted Mean Total Phosphorus	Limit (Effective 12/31/06)	Percent of Sampling Events Greater than 10 ppb	
			(ppb)	(%)	
	(Kac-ft)	(ppb)	Long Term	Guideline	Observed
31-Jul-02	392.1	6.1	11.0	53.1	4.7
31-Aug-02	388.3	6.1	11.0	53.1	4.7
30-Sep-02	371.8	6.0	11.0	53.1	4.7
31-Oct-02	316.0	5.7	11.0	53.1	4.5
30-Nov-02	271.6	5.8	11.0	53.1	4.8
31-Dec-02	249.8	5.7	11.0	53.1	4.7
31-Jan-03	234.2	5.8	11.0	53.1	5.0
28-Feb-03	229.9	5.9	11.0	53.1	5.0
31-Mar-03	230.5	5.9	11.0	53.1	4.9
30-Apr-03	231.5	5.8	11.0	53.1	4.8
31-May-03	244.2	5.8	11.0	53.1	0.0
30-Jun-03	249.8	5.6	11.0	53.1	0.0
31-Jul-03	209.0	5.6	11.0	53.1	0.0
31-Aug-03	216.1	5.3	11.0	53.1	0.0
30-Sep-03	221.9	5.2	11.0	53.1	0.0
31-Oct-03	233.8	5.0	11.0	53.1	0.0
30-Nov-03	276.6	5.1	11.0	53.1	0.0
31-Dec-03	293.9	5.0	11.0	53.1	0.0
31-Jan-04	295.9	5.1	11.0	53.1	0.0
29-Feb-04	301.4	5.0	11.0	53.1	0.0
31-Mar-04	297.9	5.0	11.0	53.1	0.0
30-Apr-04	292.3	5.0	11.0	53.1	0.0

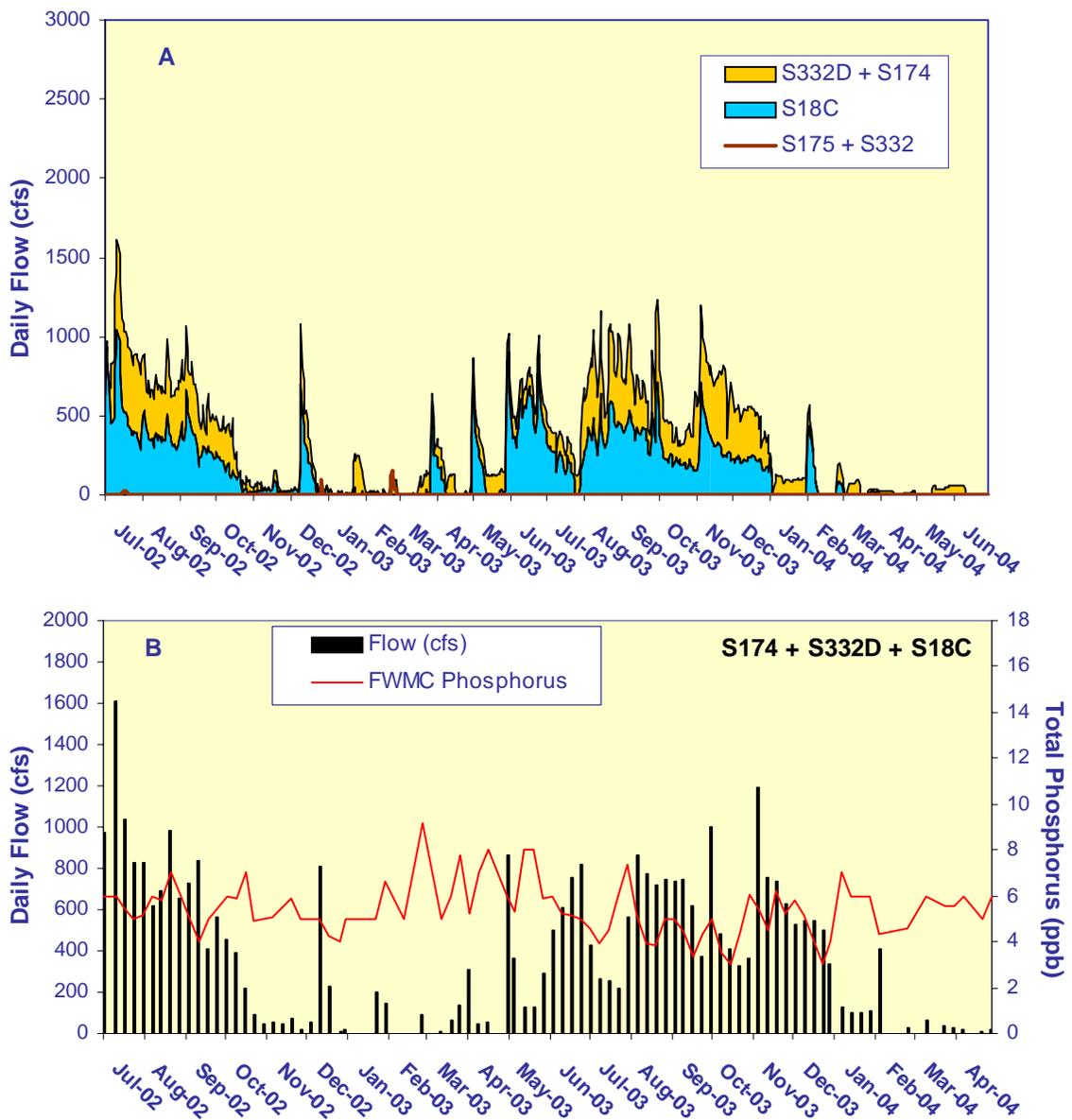


Figure 7. **A.** Daily flows into Everglades National Park through Taylor Slough and S18C. **B.** The relationship between daily flows at Taylor Slough structures and S18C and the corresponding flow-weighted mean total phosphorus concentrations for individual sampling events.